

# **Forum construction by numbers**

**written by dreamkatcha**

OK, so you've got your own web site, but how do you get people to keep coming back to it, or in web lingo how do you make your site 'sticky'? One of the best ways perhaps is to create your own community bulletin board where people can gather together and discuss whatever is on their minds. Providing your visitors contribute to it, your site will always have new content and this will give people a reason to check in on a regular basis.

Building such a community presence doesn't have to be a difficult or costly affair. If you haven't got much time to spare, or you aren't feeling particularly adventurous you can have a customised ezboard up and running in under ten minutes. These are designed for people who haven't got a server of their own or don't want the hassle and expense of finding a virtual host from which to run their board. They are also a good option if you haven't got the technical know-how necessary to set up a completely 'do it yourself' board such as Ultimate Bulletin Board or vBulletin.

If you're going to go down this route, open up the home page in a new window and click on the 'create your own community' button to get started. Once you have chosen a username and password, the obligatory name, address and phone number nags will surface. Quickly fill in the blank fields with the first thing that comes to mind. Mickey Mouse at Disney Land will do if you're stuck for ideas. Fill in the rest

of your details and click on the 'create my community' button. There really isn't much more to it than that!

In a similar vein, you could pay Forum Co a visit and let them set up a remotely hosted version of Snitz for you. This is a lesser-known, though a very well designed forum which normally has to be set up manually if you download it from the creator's home page. This is one forum script I wouldn't advise you to attempt to run from a free server, not because it's difficult to set up, but because dependable, free ASP hosts are so difficult to find. If when you see Snitz in action it's love at first sight, either let Forum Co. host and manage it for you or bite the bullet and pay for a real host. If your heart is set on using a remotely hosted board, the best place to survey the options available to you is the remotely hosted bulletin board section of [Hotscripts.com](http://Hotscripts.com).

## **Searching for a host and other considerations**

On the contrary, if you're confident that you have the ability to set up what the BB connoisseurs would call a *real* board, you can begin exploring the various hosting options available to you. This being a freebie web resource site you wouldn't expect me to espouse the merits of finding a *paid* host, yet in this instance, you really *do* get what you pay for. As with anything on the net, if you look hard enough, you can find it for free, nevertheless, just because something is free it doesn't necessarily mean you're getting a good deal.

Free hosts are fine for running very small, low traffic boards with just a handful of members, but as soon as your board takes off, you will find that the services on offer are too restrictive to allow your board to reach its full potential. A good place to weigh up all the available options and read

impartial customer testimonials is the [Web Hosting Talk forum](#). If you need convincing further that paid hosting is the way to go, visit the home page of a free host and see what is on offer, then compare these features with the ones provided by a paid host. I think you'll agree that the extra expense is worthwhile in the end.

When you're looking for a host to store the HTML files of your web site, pretty much anything will do, however, when you're looking for a home for your bulletin board you have to be a bit more selective. Your requirements will vary depending on which board you have chosen to set up so make sure you have made this decision before going host hunting (see below for my advice). For example, UBB and Ikonboard consist of CGI code, vBulletin is written in PHP, whereas Snitz is coded in ASP.

It isn't really necessary to know anything about these different scripting languages at this stage, just keep in mind that to run a CGI board you will need a host that supports CGI scripts, to run a PHP board you will need a host that supports PHP, and so on. Don't worry, you don't have to be Sherlock Holmes to find out exactly which script languages your host supports. This information will always be displayed in a prominent position on host home pages since they are such highly sought after features.

As I said earlier though, before doing anything, your first step is to decide which board you are going to use since this will determine the type of host you require. The great divide between the various options is culminated primarily by your finances. Some boards are completely free; Snitz, YABB and Ikonboard (defunct as of January 2017) for example, yet the license for others will cost you anywhere in the region of ten dollars to thousands of dollars.

Obtaining illegal versions of commercial forum software is child's play - even so, I wouldn't advocate their use. I stand by my belief that fairly-priced, quality software should be *paid for* in support of the hard-working and talented developers. I can't stress enough that if you're determined not to have to pay for your forum script, look into the free alternatives linked above rather than resorting to piracy. Moral issues aside, if you use stolen scripts, unless you're going to hide them away under a shroud of private login screens, sooner or later someone is going to find out what you're up to and notify the relevant authorities. If you get caught using a board without a license, the FBI aren't going to come knocking at your door with a warrant for your arrest. Still, what the authors of the forum software *can* do is contact your host and have your account terminated. Bye-bye posts, member profiles, templates, settings and so on.

While we're on the subject of being rumbled for using an unlicensed board, being caught isn't simply a matter of waiting for some busybody with too much time on his or her hands to come along and report you. Scriptwriters are now taking a much more proactive approach to fighting piracy and often incorporate 'phone-home' code into their scripts to help monitor their use. For instance, some unlicensed scripts on first being installed automatically fire off an email to the script creator's piracy department to inform them of your misdemeanour. Nevertheless, determined not to be outwitted, pirate release groups painstakingly analyse this code for any phone-home references and strip them out before releasing their own doctored version of the script to the public; a process akin to cracking a game or application.

What I've come to realise is that you don't always get what you pay for in the world of bulletin boards. For instance, UBB will set you back \$250 plus annual renewal fees and yet is extremely basic when viewed alongside Ikonboard for

example, which is free. With UBB you really are buying the bare bones of a bulletin board. If you want to add the simplest of features to it such as the 'last post by...' message, for instance, you have to do it yourself by editing the CGI files (known as hacking). This isn't a complicated procedure, but *is* quite time consuming and for \$250 you would expect these features to come as standard.

On the other foot (I've run out of hands now!), Ikonboard, YABB and MyBB, for instance, are completely free and can do everything that some of the more expensive boards can and more besides. phpBB and Snitz are also freebies, but you're going to have a much tougher time trying to find a reliable, free host that supports boards coded in PHP or ASP. You will find that many ASP hosts, for example, won't support FTP (which is an absolute necessity in my opinion), will have limited web space available and will suffer ridiculous amounts of downtime.

If you want my advice, Invision Power Board is the star pupil amongst the free boards so grab that instead. If money isn't an issue, however, or you have plenty of loyal members who would be willing to make a donation towards the cost of purchasing a professional, commercial script, vBulletin is the only one worth considering. It is far more reasonably priced than UBB, is backed by an extremely progressive development team and a support network which is second to none.

To download a free bulletin board (or at least the setup files), all you have to do is find the download section of the home page and click on the compressed archive file (in most cases it will be smaller than 1mb so you won't have too long to wait). Downloading a commercial script obviously will not be possible until you have been granted member status and

this will inevitably involve submitting your credit card details.

If you can't afford to pay for a real host (or you're just a big cheapskate!), the best place to find a free host for any purpose is always [www.freewebspace.net](http://www.freewebspace.net), so make your way over there now. OK, click on the 'advanced search' button and tick the relevant boxes as you did in the preceding web design tutorial. Let's assume we're throwing together a CGI board. In this scenario, the fundamental option is going to be CGI support so tick this box first. If you were setting up an ASP or a PHP board you would need to look for a host, which in addition to supporting these file types, also supports MySQL (or one of the lesser-known) databases. There is no 'database' tick box at FWS so you will have to gather this information yourself from the host home pages instead.

When you require more advanced hosting features such as these, you can't afford to be as fussy as we were in the web design section so don't automatically assume that you will be able to find a bannerless host that also supports FTP. What is more important is server reliability and the number of megabytes of webspace a host has to offer. Anything less than twenty and you would be better off looking elsewhere.

The installation files of the board will occupy minimal space, but a reasonably active board can soon expand and get out of control if not regularly pruned. You don't want to have to uproot the whole thing when you realise you haven't given yourself ample breathing space so make sure you pick the host with the most (megabytes that is) from the outset, all else being equal of course. In the usual way, follow the links, compare all the offers until you find the one that suits you best and sign up for a free account.

When you've made your choice, the next thing you need to do is find out whether your host is using Unix or NT servers - this information will often have to be added to various setup files before you can proceed any further. You can find this information by either browsing through your host's FAQs or you can visit [www.netcraft.co.uk](http://www.netcraft.co.uk) and perform a 'Who Is' lookup (click on the 'what's that site running?' button, type in the web site address of your host and make a mental note of the result).

## Installation

Now find the compressed archive file you downloaded earlier and extract it using the 'extract with full path' parameter. This ensures that all the files arrive safely in the correct folders. Find the readme or install file and open it; this will give you step by step instructions for setting up your bulletin board. These will be specific to your chosen board, but will share many common features. For a start, they will all require you to upload the files contained within the compressed archive to specific directories using either an FTP client or your web browser.

To make things simpler for yourself I would recommend that you use the folder names suggested in the readme file. For a CGI board, for example, the files with a CGI extension need to go in your 'cgi-bin' directory (if it isn't already there you will need to create one) and everything else usually goes in the 'non-cgi' directory (or equivalent). It isn't essential that you use these folder names - as long as you 'tell' your board where you've put everything later on, it will run fine wherever you store it, nevertheless, it is much simpler to stick to the default settings.

You must upload graphics files in BINARY mode and everything else in ASCII mode. To change these settings look for a 'transfer mode' option in the menu bars of your FTP client and click on either the A or the B button before beginning any transfers. Note that sticking with the 'automatic' option doesn't always get the job done. If once you have installed your board, the graphics look distorted or the script files (the ones with CGI, ASP or PHP extensions) fail to appear in your browser, more than likely you will have uploaded them using the wrong transfer mode.

If so you will have to re-upload them and try again. Just a quick note regarding web-based uploaders/file managers before we move on - if you are setting up a CGI board and your online uploader won't allow you to predetermine the transfer mode or change the CHMOD settings of your files you're not going to be able to proceed, in which case you will have to find a more flexible host, or even better, one that provides a real FTP account.

Another aspect of installing a bulletin board which is common to all CGI (but not all ASP or PHP) varieties is setting the CHMOD or permission settings. Again this is essential so make sure you pay attention to what the readme file instructs you to do. Once set, these either restrict or permit remote or local access to the files and folders on your server. This can be done using any FTP client and the procedure is as follows: login to your FTP account and highlight the files or folders you wish to modify.

Now right-click somewhere in the selected area and find the 'change permission attributes' option. After clicking on it, a menu will appear containing six tick boxes, a single dialogue box containing a three-digit number or both. As you put a tick in the boxes notice that the number in the dialogue box (if there is one) changes. This is because you can set your



CHMOD settings using either method. For example, ticking all six boxes is the equivalent of entering 777 into the dialogue box.

Now you are aware of this, you will soon get to know which tick configurations produce which three-digit codes. You will find that any files or folders which need to be writable from your (and your visitor's) web browser should be set to either 755 or 777, but again refer to the specific instructions for your board. The reason these changes weren't necessary when you set up your main web site is that more than likely it contains no dynamic content and therefore doesn't need to be remotely modified. A web page is only dynamic if it allows you or your visitors to contribute to its content using a web browser. A few examples include guest books, free for all links pages, shoutboxes, polls, and bulletin boards of course.

Assuming all your files have been uploaded to the correct locations and have been CHMOD-ed properly (for CGI boards) you can disconnect from the FTP server and run your board's installation file from your web browser (this will usually be called `install.cgi`, `install.php` or `install.asp`). If at this stage your browser displays an 'internal server error' message you will have to check your permission settings and make sure you have uploaded your files using the correct transfer mode and try again. If everything goes according to plan you will be whisked away to your admin centre where you will be prompted to choose an administrator username and password - this is the account you will use to make any changes to the board from your web browser.

Before being allowed to create any forums or categories for your board you will have to provide a few details regarding the configuration of your server. For CGI boards, the first of

these is likely to be the absolute path to your server's Perl scripts. Perl isn't something you yourself have to install. It will already be there, ready and waiting to jump into action providing you have chosen an appropriate host. Your task is simply to find out where they are located. Very often the install file will guess this information correctly, but if not you will have to ask your host to help you or read through the FAQs on their home page.

Note that absolute paths do not contain an HTTP or a WWW prefix - you are dealing with plain directories here, not web site addresses. The next question will probably be "is your host using a UNIX or an NT server?". If you were paying attention earlier you will already have this information to hand. If not, shame on you! - go and stand in the corner and put the dunce hat on your head. You will also need to set the location of your cgi-bin and non-cgi folders as well as some of the files contained within them. Just follow the instructions to the letter and you can't go far wrong.

When setting up a PHP or an ASP board many of the same principles apply, yet certain other idiosyncrasies are clearly evident. As I mentioned earlier, a prerequisite of setting up PHP (and most ASP) boards is that you find a host which supports MySQL or an equivalent database. Don't worry if this term is unfamiliar to you, all you need to know at this stage is that a database is where all your board's configuration details, posts and member profiles will be stored on your server. This is the most salient feature of most PHP and ASP boards; they use databases as opposed to the flat file systems utilised by the vast majority of CGI boards.

With flat file boards, all the board's files are stored in directories which are easily accessible via an FTP client. In contrast, to access the data of a board which uses a database 'backend' you have to log in to a server-side GUI

and browse through the tables using a script known as phpMyAdmin (other interfaces are sometimes used in its place, though this one remains the most popular).

Although there are many differences between the two systems, the most noticeable one is the time it takes to load threads, post messages, search the board and so on. In this department, boards which use a database backend tend to be much faster than the more traditional, outdated even, flat-file boards. Any Perl expert will tell you that a CGI board, if well written, should be just as fast as its PHP equivalent, nonetheless, in reality, this rarely seems to be the case. I'll let you conduct your own research to discover the remaining, less subtle differences.

To get started you will usually have to make a few changes to your config.php or config.asp file. As with CGI files, these can simply be opened using any old basic text editor (Notepad will do the job very nicely). Before proceeding any further you will be required to add or modify such entries as the location and name of your database and the username and password used to access it. Once executed, the config file will attempt to connect to the database and make the necessary changes. If it is unable to do this you will have to ascertain whether or not you have permission to access the database on your server and that you have modified the config file correctly.

If everything goes according to plan, however, you should be greeted by a welcome screen from which you can proceed to set up your board. When you are happy with your board's fundamental settings, before doing anything else, make sure you delete the installation file from your server so that it cannot be tampered with by malicious users. The same goes for any upgrade script files you may have uploaded along with the rest of the package.

Getting back to files and folders though, don't be too concerned with getting these locations wrong at first as you can always go back and correct them later. More than likely you will be alerted to any mistakes so that you can put them right. When your board's setup routine is satisfied that you know where everything is stored it will let you proceed to the forum control area where the customisation work begins.

For now, making it look pretty isn't crucial. The first thing to do is to create a few forums to see if they are writable. OK, done that? Great, now open your board in a new browser window, log in using your username and password and try to submit a new thread. If you are able to post, you must be doing something right. If not, check those permission settings again... and again and again (is there an echo in here?) until your board does what it's told.

## **Customising your forum**

When your new creation is behaving itself, the final stage is to personalise it, give it a splash of paint, add some hacks and generally spruce it up until it starts to resemble something vaguely like a bulletin board. To implement hacks you will need to visit a hacks/mods repository. These are specific to your particular board so any old hacks site won't do. The best UBB hacking site is the UBB Developer's Network, vBulletin.org is the numero uno place to track down hacks for vBulletin, while IB Supported is your best bet for their Ikonboard counterparts. If Invision Power Board is your forum script of choice and you intend to install a hack or three, Invisionize is worth a look. More of a phpBB nut? Check out phpBB Hacks.

The concept behind board hacking is very simple; it involves finding a new feature you're interested in adding to your

board and then modifying your script files, templates or database to accommodate the changes. Hacks can consist of either an instructional text file plus some extra library or script files or just the text file on its own. While hacks are straightforward to implement, what you have to remember is that you can only install a particular hack if it was designed to work with the board version you are currently using.

For instance, a hack written to work with Any-Old BB 1.0 will not necessarily work with Any-Old BB 2.0 because numerous code rewrites will very likely have taken place during the migration from one version to the next. For this reason, it is essential that you check that the hack you wish to use is compatible with the board you are running before continuing any further. You can find out which version you are using by looking at the copyright information at the bottom of your board (known as the footer).

Once you have downloaded a hack, the first thing you will need to do is upload any additional files to your web server. The next step is to edit the original script files which you should be maintaining copies of on your local hard drive. I would strongly advise you *not* to use your usual HTML editor for this task because many of them assume they know best and will add inappropriate or superfluous code to the scripts, only to give you headaches later on.

Instead use Notepad, Wordpad or another non-intrusive, plain text editor. When you're all set to make the changes, open the readme file which came with your hack and follow the instructions. Some of these will direct you to find certain lines of code and substitute them for modified variants, whereas others will require you to leave the existing code alone, but append extra code before or after it. A quick way to locate particular portions of code is to use the 'find'

option of your text editor, which you can access by pressing 'control' and 'f' simultaneously.

With the script file alterations taken care of you may now be required to make changes to your templates. These can be accessed using your admin control panel - if you're lucky your forum script will include a template search engine to make finding the relevant code easier. Templates, being constructed using plain text, can be modified using the same techniques outlined above.

More complex, 'major addition' hacks may require you to modify your database. This is carried out by running SQL queries from within your phpMyAdmin GUI. It sounds more complicated than it is - really what it amounts to is copying and pasting commands into a dialogue box and pressing the submit button to action the changes.

After completing all the stages listed in the readme file, retrace your steps to make sure you've followed the instructions down to the last letter. When you're satisfied that you've carried out all the required stages correctly, save your modified files, re-upload them using your FTP client and visit your board to check if the changes have been implemented correctly. If things start to go haywire you will have to replace the modified files with the original ones or revert the templates you have edited and go back to the drawing board.

I strongly recommend that you keep a log of exactly which files, templates and database tables you have modified so you will be able to reverse the changes later if you decide to uninstall the hacks or re-apply new versions of them. If you don't you could end up with the kind of mess the Windows registry gets into when useless entries are left behind. Worse still, previous code modifications you have long since

forgotten about could conflict with new ones you wish to make.

If after all this tweaking you still don't like the way your creation looks remember that you can replace any of the default graphics with ones of your own. You can find bulletin board icons, buttons, avatars and logos in the same places as the hacks we discussed earlier. All you have to do to make the switch is right-click on a picture you would like to change and make a note of its filename. Now get the graphic you want to replace it with, rename it accordingly and overwrite the old file on your server. The next time you refresh the page your newly customised board will be unveiled.

## **Backing up your forum - better safe than sorry**

When your lust for BB eye candy has been satiated, a good idea is to backup your whole board in case it is lost due to server errors, hackers, account deletions etc. This couldn't be easier; if you're using a flat-file database system, create a new folder on your hard drive and name it appropriately, the label 'BB Backup' or similar will do nicely. Now login to your FTP server, highlight all the files and folders and download them to your new local folder.

Alternatively, if you're using a board with a MySQL or equivalent database you will have to log in to your phpMyAdmin account or Telnet into your server and 'dump' (yes, that's a technical term) the database into a file on your web server. This can subsequently be transferred to your own computer using a download manager and stored in a safe place. If in the future your board requires emergency resuscitation you can re-upload the files or import your

database and be all set to continue where you left off, whether it be from the same hosting account or on a different server entirely.

While it *is* possible to make a forum backup using PHP scripts such as phpMyAdmin, doing it this way isn't recommended for larger databases. This is because, for security reasons, the execution of PHP scripts are set to timeout after a pre-defined number of seconds. If dumping your database takes longer than is permitted by this timeout setting, your backup will be cut short and you will be left with an incomplete, useless file. In the absence of any notification to the contrary, it may seem like everything has gone according to plan. However, opening the file in a text editor can reveal that its size falls well short of what you would expect judging by the reported size of the database in your control panel.

The most reliable means of making a database backup is to use an SSH client such as PuTTY to securely access the remote computer where your forum is hosted and issue the `mysqldump` command via a console. This takes longer to describe than to actually carry out. The procedure is as follows:-

1. Download PuTTY from the home page linked above.
2. Double-click on its icon to open the GUI.
3. Click on the SSH radio button to place a dot inside the circle (if your host doesn't offer secure shell connections, Telnet will have to do instead).
4. Enter your site's FTP or IP address in the box provided.
5. Use your forum administrator's control panel to close your forum to prevent new information being added to your



database.

6. Click on the 'open' button to open a new console window.

7. Enter your FTP password when prompted.

8. Use your FTP client to create a new folder above your publicly accessible folder to store the backup in. If you place it in the public\_html folder there is a chance someone could download it and gain access to confidential information or re-use your database without your permission.

9. Type the command...

```
mysqldump --opt -uusername -ppassword database_name >  
backupfolder/name_of_backup.sql
```

...into the command window and press enter. Yes, you are supposed to include a 'u' before the username and a 'p' before the password, these aren't typos.

10. Wait a few seconds until the command prompt becomes available again and then use your FTP client to check that the new file has appeared in your backup folder.

11. Re-open your forum to allow posting to resume.

That's all there is to it. Once you've established which details go where within the above command you can type them into a text file and save it for future use - PuTTY supports the copying and pasting of commands so this should eliminate the possibility of typing errors.

To restore a database you would login to phpMyAdmin, drop (delete) the database you wish to replace (if one exists) and then use PuTTY to issue the command...

```
mysql -uusername -ppassword database_name <  
backupfolder/name_of_backup.sql
```

And now, at last, the moment you've all been patiently waiting for - go forth and multi... erm, I mean spread the word. Good luck everyone.

**Still looking for more bulletin board scripts or resources? Have a look here.**

Big Boards (RIP) - Ranked listings of the most active forums on the web. Can be re-ordered using criteria such forum script utilised, subject matter covered, number of posts or number of members etc. Fantastic resource while it lasted!

[Board Mod](#) - An automated hack integration tool for YABB.

[Flame Warriors](#) - Can *you* resist the temptation to match these stereotypes with your fellow forum members?

[Hot Scripts](#) - Searchable script database. Lists scripts coded in all languages including remotely hosted alternatives.

[Invision Power Board](#) - Certainly one of the forum software front-runners. Written in PHP and utilises your choice of three of the most popular database systems. Despite appearances, there *is* a free version available to download. This has been re-branded as a 'free trial' in order to raise the profile of their premium support, licensed alternative yet remains a fully functional forum script. A spin doctor's work is never done, bless 'em. :p

[List of emoticons](#) - A well-organised list of every smilie known to man (or woman). Note that they're of the symbolic text variety, :) for example.

[My Smilies](#) - The largest collection of free smilies available on the web.

[PHP BB](#) - Free, do it yourself, PHP bulletin board backed by a thriving community and development team. One of vBulletin's most worthy rivals.

[Simple Business Machines](#) - Another solid, PHP, do it yourself freebie. Maintained by a talented development team and supported by a substantial user base of loyal fans. Began life as the PHP/MySQL off-shoot of YABB.

[The Admin Zone](#) - Forum administrators unite to discuss how to successfully manage web forums. Full marks for not using the slogan "the bulletin board resource site *for* admins *by* admins". ;)

[The CGI/PHP/WebApps Resource Index](#) / [The Perl Archive](#) - Searchable script databases. Includes descriptions, reviews, ratings etc.